one endangered object is detected within the protection zone and the working element is enabled by the evaluation unit if an endangered object is not detected within the protection zone.

44. The apparatus according to claim 43, wherein the evaluation unit outputs a switching output to the working element, the switching output having a first switching state when an endangered object is located in the protection zone and a second switching state when an endangered object is not located in the protection zone, the working element being disabled or enabled when the switching output is in the first and second states, respectively.

45. The apparatus according to claim 44, further comprising a warning indicator communicating with the evaluation unit, the evaluation unit activating the warning indicator if an endangered object is located in at least one warning zone defined inside the protection zone.

46. The apparatus according to claim 45, wherein the evaluation unit outputs a warning output to the warning indicator, the warning indicator being activated or deactivated, depending on a switching state of the warning output.

47. The apparatus according to claim 45, wherein the warning indicator emits at least one of an optical warning signal and an acoustical warning signal.

48. The apparatus according to claim 45, wherein the warning zone borders the protection zone.

49. The apparatus according to claim 48, wherein the evaluation unit detects a direction of movement of an endangered object inside the warning zone.

50. The apparatus according to claim 49, wherein the warning indicator is activated only if an endangered object located inside the warning zone is moving toward the protection zone.

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51. The apparatus according to claim 46, wherein the protection zone comprises a plurality of protection zones each having at least one warning zone, the switching output comprise separate switching outputs associated with each protection zone, and the warning output comprises separate warning outputs being associated with each warning zone.

52. The apparatus according to claim 51, wherein the evaluation unit disables the working element if an endangered object is located in at least one protection zone.

53. The apparatus according to claim 44, wherein the evaluation unit defines dimensions of the protection zone and warning zone independence of parameters input into the evaluation unit.

54. The apparatus according to claim 44, wherein dimensions of the protection zone and warning zone are predetermined as a function of a learning process.

55. The apparatus according to claim 45, wherein the warning indicator further comprises display elements receiving the switching output and warning output and visually indicating the switching states of the switching output and the warning output.

56. The apparatus according to claim 46, wherein the warning zone and protection zone can be disabled for predetermined time intervals, whereby if endangered objects enter the warning zone and protection zone, the working element is not disabled via the switching output, and the warning indicator is not activated via the warning output.

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57. The apparatus according to claim 43, further comprising a transmitter communicating with the evaluation unit, the transmitter generating a visible light beam which extends, at least by sections, in a straight line along a border of the protection zone.

58. The apparatus according to claim 43, further comprising a safety bus system connecting the evaluation unit to a control of the working element.

59. The apparatus according to claim 43, further comprising a mechanical holding device adjustable in three spatial directions, the camera being seated in a form-fit on the mechanical holding device.

60. The apparatus according to claim 43, further comprising an illumination system associated with each camera.

61. The apparatus according to claim 43, wherein the working element comprises a folding press including at least one upper tool cooperating with at least one lower tool.

62. The apparatus according to claim 61, wherein the protection zone encompasses a fold line between the upper tool and the lower tool.

63. The apparatus according to claim 61, wherein the folding press includes a plurality of pairs of cooperating upper tools and lower tools, the camera monitoring a predetermined number of such pairs of upper tools and lower tools.

64. The apparatus according to claim 43, wherein the working element comprises a printing press having a feeder and an output.

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65. The apparatus according to claim 64, wherein the detection region monitored by at least one camera includes at least one of the feeder and the output of the printing press.

66. The apparatus according to claim 64, wherein the detection region encompasses a paper-intake region at the feeder of the printing press.

67. The apparatus according to claim 43, wherein the working element comprises a working robot.

68. The apparatus according to claim 43, wherein the at least one endangered object detectable by the evaluation unit includes a person.

69. The apparatus according to claim 43, wherein the at least one endangered object detectable by the evaluation unit include a human hand or finger.

70. A method for monitoring a detection region of a working element, the method comprising the following steps:

monitoring continuously a detection region with at least one camera;

reading image information, in the form of color values, generated in the camera during the monitoring into an evaluation unit;

distinguishing endangered objects from non-endangered objects with the evaluation unit based on the color values;

disabling the working element with the evaluation unit, if at least one endangered object is detected within at least one protection zone in the detection region; and

enabling the working element with the evaluation unit if no endangered object is located in the protection zone.

71. The method according to claim 70, wherein the image generated by the camera is read into the evaluation unit in the form of a pixel matrix with different color values.

72. The method according to claim 71, wherein the distinguishing step comprises:

assessing the color values with a threshold-value unit; and

creating binary images based on the assessment with the threshold-value unit.

73. The method according to claim 72, wherein the threshold-value unit is a component of a neural network.

74. The method according to claim 72, wherein the assessing step comprises:

associating three color values of the base colors of red, green and blue with each pixel of the image read into the evaluation unit;

assigning the color values predetermined weight factors;

creating a linear combination from the color values using the weight factors; and

assessing the linear combination of color values with the threshold-value unit using a threshold value.

75. The method according to claim 74, further comprising, determining at least one of the threshold value and the weight factors through a learning process, in which colors of the endangered objects are established.

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76. The method according to claim 74, wherein the endangered object are of a predetermined color, with the threshold value being adapted to the predetermined color.

77. The method according to claim 72, further comprising:

forming a connected region of foreground pixels in the binary images generated by the threshold-value unit to represent the endangered objects; and

eliminating individual foreground pixels in a background around the connected region using morphological operators.

78. A method for monitoring a detection region of a working element, the method comprising the following steps:

monitoring a detection region with at least one camera;

defining at least one protection zone in the detection region;

reading image information generated in the camera during the monitoring into an evaluation unit;

comparing the image information to reference images stored in the evaluation unit to detect endangered objects inside the at least one protection zone in the detection region;

disabling the working element with the evaluation unit if at least one endangered object is detected within the protection zone; and

enabling the working element with the evaluation unit if no endangered object is located in the protection zone.

79. The method according to claim 78, further comprising converting the image information into binary edge images based on the size of gradients of their brightness distributions.

80. The method according to claim 78, wherein the protection zone is bordered by a reference object having a defined contrast pattern that forms at least a portion of the reference image.

81. The method according to claim 78, further comprising:

recording images, during a learning process, of the machining steps performed by the working element for a workpiece that constitutes a non-endangered object; and

using the recorded images recorded during the learning process as the reference images for distinguishing endangered objects from non-endangered objects.

82. The method according to claim 81, further comprising modifying the protection zones based on the machining step being performed.

83. The method according to claim 78, further comprising performing a self-test at predetermined time intervals.

84. The method according to claim 83, wherein the self-test comprises determining a detected location of predetermined fixed points in the image information generated by the camera and comparing the detected location of the predetermined fixed points in the image information generated by the camera to reference locations of the predetermined fixed points.

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85. The method according to claim 83, wherein the self-test comprises moving a test object into the protection zone at pre-determined times and checking if the test object is recognized

86. A method for detecting objects, comprising:

defining a detection region on a work element

defining at least one protection zone in the detection region;

monitoring the detection region with a camera;

generating an image of the detection region with the camera;

comparing the image to a reference image to determine if an endangered object is in the protection zone; and

disabling the work element if an endangered object is in the protection zone.

87. The method according to claim 86, further comprising:

defining a warning zone inside the detection region;

based on the comparison step, determining if an endangered object is in the warning zone; and

generating a warning if an endangered object is in the protection zone.